SEA TURTLE STRANDINGS AND SIGHTINGS IN SOUTHEASTERN LOUISIANA

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Prepared for

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LSU-CFI-89-05

September 1989

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ACKNOWLEDGMENTS

This study was funded by the U.S. National Marine Fisheries Service in Panama City, Florida. Mr. Larry Ogren provided valuable advice and guidance. Ms. Kate Himel and Mr. Thomas Shavor of Nicholls State University conducted the stranding and interview surveys. Mr. Warren Mermilliod was instrumental in obtaining the cooperation of the Louisiana Council of Underwater Diving Clubs. The Louisiana Department of Wildlife and Fisheries provided boat transportation.

INTRODUCTION

The nearshore and inshore waters of Louisiana are believed to provide important feeding habitat for sub-adult and juvenile Kemp's ridley sea turtles (Hildebrand 1982, Ogren [1988]). In fact, regularly each year there are reports of short duration, local concentrations of small sea turtles in such areas as Calciseau Lake and Caillou and Barataria Bays (Ogren [1988]), Fuller 1988, Fuller and Tappan 1986). Frequently reports of this type are made by word of mouth and as a result only a few of these events are substantially documented. The main objective of this study was to collect data on the occurrence of juvenile sea turtles in the inshore waters and hopefully through tagging obtain documentation of these events.

In addition any information on the sightings and strandings of sea turtles in southeastern Louisiana was collected.

METHODS AND MATERIALS

The method for collecting these data consisted of two main parts: (1) finding out where and when sea turtles began appearing in shore waters, primarily through interviews and informal conversations with marine oriented individuals, and (2) locating cooperative fishermen who

would let us accompany them on their fishing trips so that we could tag turtles. Two students from Nicholls State University were hired to conduct the interviews. The impending enforcement of federal turtle excluder device (TED) regulations beginning in May and subsequent controversy virtually eliminated the possibility of working with local fishermen.

We modified our approach and concentrated on interview data from non-commercial fishermen (e.g., SCUBA divers, recreational fishermen, helicopter pilots, charterboat operators). In order to improve the chances of these people turning in sea turtle sightings and accurately remembering important features of the sightings, presentations were made to the Louisiana Council of Underwater Diving Clubs (January, 1989) and the Annual Louisiana Fishing Rodeo and Tournament Directors' Workshop (April, 1989). Identification keys and reporting cards were distributed at this time. People were asked to look for all sizes of turtles in all coastal areas. Identification keys, reporting procedures and cards were subsequently published in the spring newsletter of the Council of Underwater Diving Clubs. In addition we conducted stranding surveys within Barataria Bay and along the Louisiana coast from Fourchon to Grand Terre Island (Figure 1). Interview trips and stranding surveys were conducted on a two-day, approximately twice a month schedule from late May through August, 1989 (Table 1). Stranding data was recorded on the Sea Turtle Stranding and Salvage Network (STSSN) recording sheets and sent to the STSSN coordinator for Louisiana. As the summer progressed and the conflict increased it became more difficult to conduct interviews

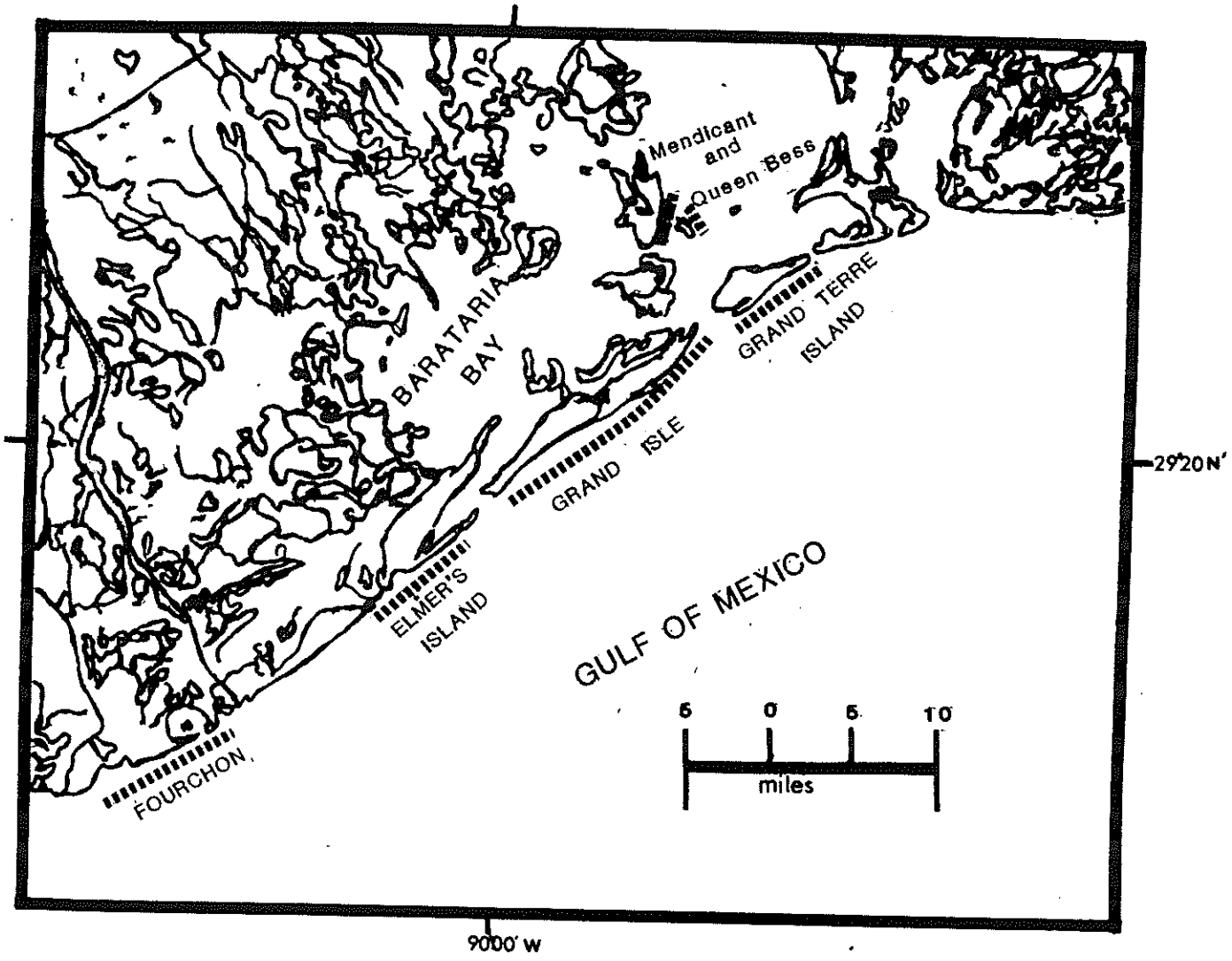

Figure 1. Location of beaches and marsh edge surveyed for sea turtle strandings in Lafourche and Jefferson Parishes, Louisiana, 1989.

Table 1. Number of stranding surveys conducted at each beach between May and August 1989, Lafourche and Jefferson Parishes, Louisiana.

Beach Name	Month			
	May	June	July	August
	(2)[1]	(2)	(4)	(5)
Grand Isle	1	2	2	4
Fourchon	1	2	2	4
Elmer's Island			2	3
Grand Terre	1			2
Queen Bess Island	1			
Mendicott Island	1			

[1] The number in parentheses indicates the number of additional trips made to conduct informal interviews.

of any type and along some populated beaches, even stranding surveys were affected.

RESULTS

Small turtles in inshore waters

We were not very successful in obtaining hard data on the occurrence of small turtles in inshore waters of Barataria Bay. Fishermen who would have been willing to work with us on tagging at the beginning of the year were reluctant once the TED controversy began. I had hoped by having people interacting regularly with coastal residents throughout the summer that we would have at least heard of turtle captures in the bay, but this was not the case. I did receive reports of unusual numbers of small sea turtles (20 to 30 cm in length) being caught in Terrebonne Bay during the first two weeks of July, but because of the tense atmosphere about TEDs, I was not able to view or tag these turtles (Table 2, Figure 2). Other reports include: (1) a shrimper who caught a juvenile sea turtle (about 30 cm in length) with a wing net in Caminada Pass, at the north of Barataria Bay during the summer of 1988, (2) a tagged Kemp's ridley caught in Catfish Lake, north of Golden Meadow in May 1989, and (3) a biologist who saw a small sea turtle in the coastal waters near Myrtle Grove (marshes northeast of Barataria Bay) between 1968 and 1971 (Table 2, Figure 2).

Table 2. Sea turtle sightings and strandings reported from May through August 1989, southeastern Louisiana.

Map Number	Species[1]	Location	Condition[2]	Observation Date	Who Reported[3]
1	UK	Terrebonne Bay	A	July 1-14, 1989	B
2	UK	Caminada Pass	A	Summer 1988	F
3	LK	Catfish Lake	A/T	May 1989	B
4	UK	Myrtle Grove Marshes	A	1968-1971	B
5	DC	Main Pass, Block 299	A	May 1989	B/D
6	DC	South Timbalier, Block 62	D	April 29, 1989	D
7	DC	10 mi. south of Sulphur Rig	A	July 29, 1989	D
8	DC	West Delta, Block 117	A	July 29, 1989	D
9	DC	West Delta, Block 43	A	July 29, 1989	D
10	UK	South Timbalier, Block 151	A	April 1, 1989	C
11	CC	Timbalier Island	D	May 11, 1989	B
12	CC	Fourchon Beach	D	May 25, 1989	B
13	DC	Fourchon Beach	D	May 27, 1989	B
14	LK	Grand Isle	D	June 4, 1989	B
15	LK	Grand Isle	D	July 28, 1989	B
16	EI	Grand Isle	A	July 14, 1989	B

1 Species: UK=unknown, DC=leatherback, CC=loggerhead, LK=Kemp's ridley, EI=hawksbill
2 Condition: A=alive, D=dead, T=tagged
3 Who reported: B=biologist, F=fisherman, D=diver, C=charterboat worker

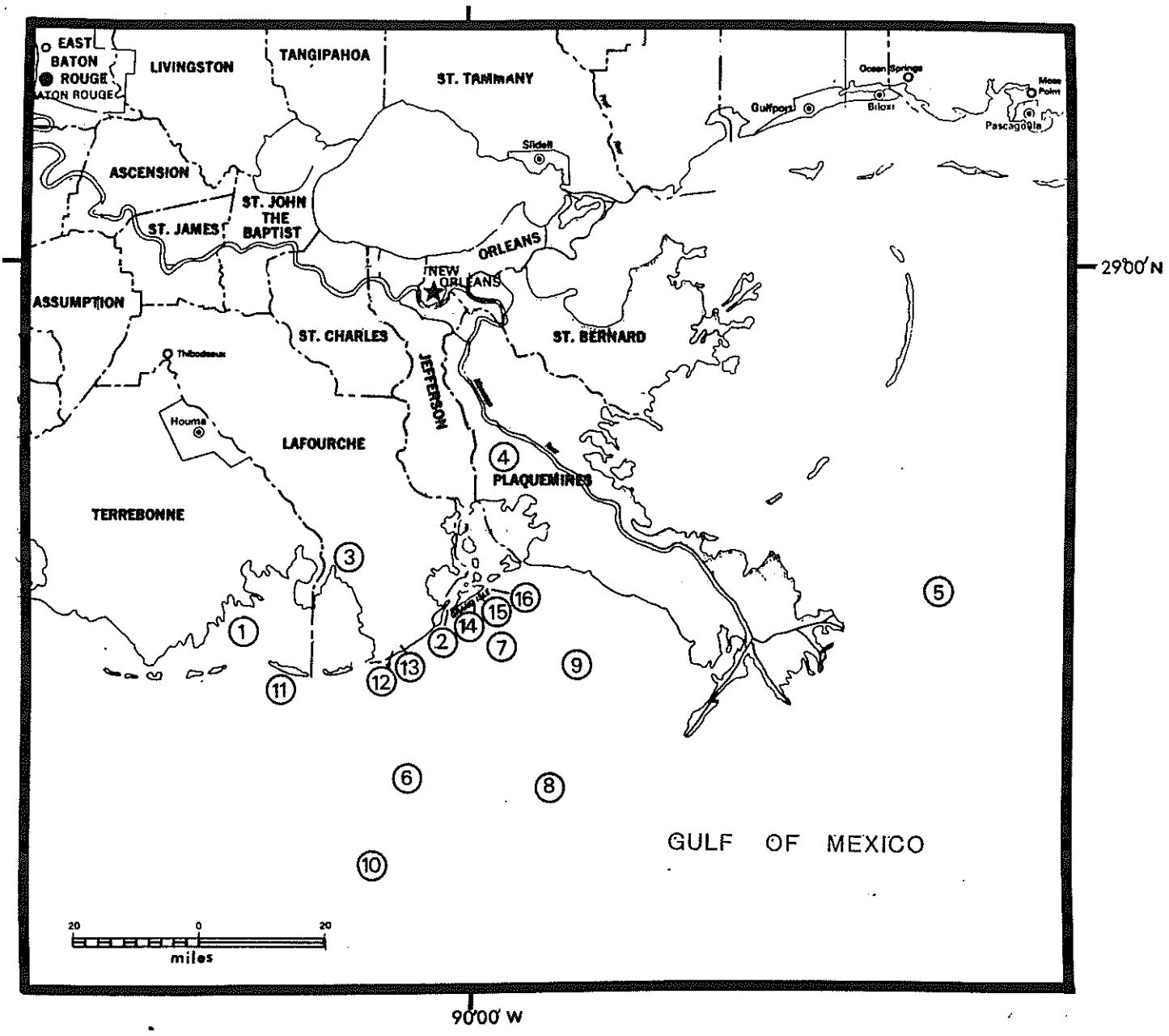

Figure 2. Location of sea turtle strandings and sightings reported from May through August 1989, southeastern Louisiana.

Informal conversations and sea turtle sightings

Interviewing marine oriented people in the coastal zone, even though they were not commercial fishermen was very unproductive this year. The majority of responses were that sea turtles were not seen in this area. Those that did respond seemed most intent in getting across their views on TEDs. However, many of the participants in the local fishing rodeos, particularly divers, were very cooperative. We received four sightings of adult leatherback sea turtles in Louisiana from diver interviews and one sighting from a charterboat captain (Table 2, Figure 2).

Strandings and stranding surveys

I received 2 reports of sea turtle strandings on Fourchon Beach during May of 1989 (Table 2, Figure 2). State biologists also informed us of at least 1 sea turtle stranding occurring on Grand Terre island in early May, but the carcass was buried before we had a chance to examine it. We found only two more stranded sea turtles during our surveys of the beach for the rest of summer, both being Kemp's ridleys (Table 2, Figure 2). We found no stranded sea turtles in the inshore waters of Barataria Bay, however, we were only able to sample here at the beginning of the summer. One other stranding of a loggerhead sea turtle on Timbalier Island was reported to me by a university scientist in May 1989 (Table 2, Figure 2). A stranded, live, juvenile hawksbill sea turtle was found in a sargassum mat on the beach at Grand Isle in July 1989. This coincided with a period of unusually heavy sargassum abundance in the Gulf.

DISCUSSION

The ground work for locating and tagging sea turtles that was in place at the end of summer 1988 was destroyed by the impending enforcement of TED regulations. This made it nearly impossible to collect hard data on sea turtles in inshore waters. However, the report of small sea turtles in Terrebonne Bay supports the claim that local abundance in inshore waters do appear to occur annually. The TED issue became highly controversial in Louisiana with most people in the coastal areas being against the required use of TEDs. This made interviews of even non-commercial people very difficult and unproductive. As the summer progressed with blockades of major waterways occurring in July and September it became unsafe to discuss sea turtle research, and even conducting stranding surveys on the more populated beaches was tricky. The number of stranded sea turtles found this summer was unexpectedly low. There were rumors circulating that dead sea turtles were being quickly removed from the beach in the more populated areas. It was also rumored that turtles caught at sea were being disposed of in ways that would prevent them from stranding on land. These claims are unsubstantiated. However, if they are true, then stranding records for populated beaches during this time period must be used with caution.

One group that was very cooperative and willing to provide information was SCUBA divers. Most of their reports are in the offshore waters around oil rigs and mainly consist of leatherback sea turtles. However, many of these people are on the water quite a bit, so there is the long-term possibility of obtaining other kinds of sightings. It also

appears, based on the number of reports I secured from other biologists this year, that more people are becoming aware of the importance of reporting sea turtle sightings. These sources of data are becoming more important as other sources such as fishermen decline.

CONCLUSIONS AND RECOMMENDATIONS

Because of the TED controversy, it is no longer feasible to rely on the ability to collect sea turtle data from many of the coastal residents. One group, the underwater divers, are still very cooperative. Most of the information they provide, however, is on offshore occurrences of sea turtles.

While this information is important for long-term sea turtle conservation, our immediate needs are for rigorous data on inshore abundance and distributions of sea turtles. In order to obtain more useful information on the inshore distribution of sea turtles we need to use a totally fishery independent sampling approach. It appears that the best direction for next year is to look at past records of inshore sea turtle sightings and try to reconstruct the physical and biological conditions at that time. Then using this information, attempt to predict likely areas and times of sea turtle occurrences and sample during those periods.

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